having never performed the function of one. May it not, with greater propriety, be considered as some form of the endochrome, a result of development of the granules of the articulation? It exactly resembles the spores of the terminal articulations, which, as has been already stated, originate in the granular endochrome of this articulation.

The parasitic plant I have now described resembles in many respects those found by Hannover and Stilling on the newt and frog. As in these, the filaments swarmed with infusorial animalcules, *Monads*, *Bursariæ*, &c. Some of these doubtless lived among the filaments while the fish was still alive; others, again, as the *Bursariæ*, must have taken up their residence there after the commencement of putrefaction. Hannover in Müller's 'Archiv,' 1842, page 73, has described the development of the conferva of the frog and newt, and has mentioned the animal-like movements of the spores. Mr. Daniel Cooper ('Microscopic Journal') has frequently observed a cotton-like conferva on the gills and fins of gold-fish. From a preserved specimen, an examination of which was afforded me by Prof. Balfour, I am inclined to believe in the existence of more than one species of this genus of parasitic Algæ.

BIBLIOGRAPHICAL NOTICES.

Gould's Birds of Australia. Parts I. to VI. Folio. 1841–42.

One hundred plates of this magnificent work are now before the public; it seems therefore high time that some notice of its contents should be given to such of our readers as may not have seen the original. Great as is the excellence of Mr. Gould's former publications, there can be no doubt that the present work exceeds them all, both in an artistic and in a scientific point of view. Additional practice in designing and additional opportunities of studying animated nature have greatly improved his pictorial powers, while his recent excursions in the wilds of Australia have supplied him with a mass of novel and original information of the highest value to the ornithologist. Students in that science too often have to regret their ignorance of the *natural history* of exotic species of birds. With no other data before them than a dried skin, they can only *conjecture* the real affinities of a species, while if they were acquainted also with its habits, food, nidification and anatomy, they might in general fix its true place in the system with the greatest certainty. As far as Australian ornithology extends, this desideratum will now be supplied by the labours of Mr. Gould and of those whom he will induce to tread in his steps; and if his efforts should in some degree allure our countrymen in the other hemisphere from the race-course and the gaming-table to a study of the works of Creation, the moral influence of his work will not be one of its least recommendations.

Mr. Gould's designs show a remarkable freedom from *mannerism*. Whether he wishes to represent the torpor of the drowsy *Podargus*, the dignified repose of the eagle, the pert *Malurus*, the restless parrakeet, or the lean and anxious wader, he is equally successful in his efforts. No attitude of action or of repose which is consistent with natural habits comes amiss to him, and in this respect he preserves a happy medium between the stiff formality of Temminck's 'Planches Coloriées,' and the occasional extravagances of Audubon. We may refer to the figures of *Lathamus discolor*, *Melopsittacus undulatus*, *Meliphaga australasiana* and *Falco frontatus*, as particularly good examples of elegance of attitude and successful fore-shortening.

This correctness of taste is no less exhibited in the accompaniments to his figures than in the figures themselves. Zoological artists are apt to fall into the extremes either of depicting nothing beyond the mere object itself, or of introducing so much detail into the surrounding scenery as to distract the attention from the principal figures. Here, on the contrary, Mr. Gould, with the true feeling of a lover of Nature, introduces as much of the surrounding landscape as serves to illustrate the manners and haunts of the bird, but takes care not to overload the scene with details of drawing and vividness of colour.

Mr. Gould has however very properly relaxed this rule in the case of *Ptilonorhynchus holosericeus* and *Chlamydera maculata*, two birds whose extraordinary manners well deserve the double-sized plates which he has devoted to them. The designs of these two magnificent plates fully equal the most successful efforts of Audubon, while in point of execution (from the vast superiority of lithography over copper-plate in depicting *plumage*) they far exceed the works of the American artist. We should indeed be proud to call in the aid of frame and glass, and decorate our study with these two beautiful pictures.

In no respect is this work more valuable than on account of the extraordinary correctness with which the tints of plumage are represented. We have often had occasion to lay specimens of the actual bird by the side of Mr. Gould's plates, and the identity of their tints is perfectly surprising.

The numerous Australian plants also introduced into the plates render the work almost as valuable to the botanist as to the ornithologist. Among the more striking of these, we may mention the figures of *Eucalyptus gibbosus*, *Epacris impressa*, *Beaufortia decussata*, *Billardiera longiflora*, *Leptospermum squarrosum*, &c.

Among the curious examples of nests figured in these plates, we may refer to those of *Rhipidura albiscapa* and *Dicæum hirundinaceum*, the one resembling a wine-glass, and the other a retort, as being highly interesting novelties. We could have wished indeed that Mr. Gould had more frequently introduced the eggs and nests into his plates, which would have tended to make his family groups more life-like, besides being a valuable addition to our scientific knowledge. Let us hope that he will supply this desideratum by hereafter publishing an "Australian Oology," for which he is known to possess very ample materials.

It would be endless to refer to the mass of new and interesting facts in natural history which are detailed in these pages. Many of them have been communicated to the Zoological Society, whence they have made their way into this and other periodicals. But we cannot pass over in silence the extraordinary habits of the bird distinguished by the rather clumsy name of *Megapodius tumulus*. [Why not have called it *tumulator, tumulorum,* or *tumulificus* ?] This singular bird, like its congeners *Talegalla* and *Leipoa,* has the habit of leaving its eggs to be hatched by solar or terrestrial heat; but not content with covering them moderately with leaves, it forms vast mounds of sand from five to fifteen feet high. Into these it burrows to a very considerable depth, where it deposits the egg and fills up the excavation with soil precisely in the manner of certain species of bees and wasps in this country. In due time the young bird is hatched, and, aided probably by its powerful feet and claws, makes its way to the surface without parental assistance! Had such a statement been made by old Marcgrave or Hernandez it would doubtless have passed for a traveller's tale, but the study of Nature is continually lowering our pride by showing that facts are more wonderful than fiction.

Critics assert that even Homer sometimes nods, and we trust, therefore, that we shall not greatly disparage this splendid publication if we point out a few examples of defective drawing which occur in the course of the work. In the plate of *Leipoa ocellata* the artist has omitted to show the feet of the hindmost figure, whereas, judging by the rule of proportion, a considerable part of those members ought to have been in sight. There is also an inaccuracy in the figure of *Stipiturus malacurus*, the lateral rectrices being represented as curved, while, in the specimens which we have examined, those feathers are quite straight.

With the exception of these trifling defects, the plates probably form as close approximations to living nature as it is possible for art to attain to.

Florigraphia Britannica; or Engraving and Descriptions of the Flowering Plants and Ferns of Britain. By R. Deakin, M.D. 58 Nos. 8vo. Sheffield. 1835–1842.

The work which we now propose to bring before the notice of our readers, having been published in a provincial town, has only recently attracted our attention; for although we well remember some of its earlier numbers having been shown to us, we cannot say that at that time they exhibited such a promise of usefulness as to make us consider it as deserving of notice. Shortly afterwards we learned that the work had been discontinued, from a want of commercial success as we then supposed, but, in reality, from the ill-health of the author, and an interval of about a year and a half having passed, it was recommenced and has since been published regularly.

The contrast exhibited between the earlier portion and that part which has appeared since the resumption of publication is such as, we think, fully to justify its early neglect, for we do not consider ourselves called upon to notice every book upon English botany that may appear, but only such as prove themselves to belong to that class which is likely to promote the advancement of true botanical science in this country. Fifty-eight numbers of the 'Florigraphia' have now been published, of which the earlier half can only be considered as a collection of moderately good and cheap figures of British plants, accompanied by descriptions, which, although apparently original, do not show much if any acquaintance with the writings of the more modern and eminent continental authors; shortly afterwards, however, proofs may be discovered that the author had become acquainted with several of them. Probably the first indication of this occurs in No. 28, where the name of *Verbascum floccosum* (W. and K.) is given, we believe for the first time by an English author, to the plant which has been usually considered as identical with the *V. pulverulentum* of Villars. Here we find what is probably to be considered as evidence that the author's health had already driven him to a warmer climate, in which it is understood that he has found it advisable to remain, thus unfortunately depriving his book of the benefit of his personal revision during its progress through the press, and causing the occurrence of misprints in some of the names of authors, places, &c. We refer to the fact, that although the name of *V. floccosum* (W. and K.) is placed at the head, still *V. pulverulentum* (Vill.) is continued as a synonym, and some portions of the description appear intended to refer to that plant; the specific character also, we suspect, was prepared before the author became acquainted with the true nomenclature; and here we must protest against the introduction into our native flora of the true *V. pulverulentum* (Vill.) which immediately follows, accompanied by its correct specific character, for we cannot look upon the *var. β nigro-pulverulentum* of Smith's 'Flora' as that plant, since he expressly states that his plant has a violet-coloured fringe to the filaments, whilst in the real *V. pulverulentum* the same part is white. Smith states that his variety lies between his *pulverulentum* (*floccosum*) and *nigrum*, whilst the plant of Villars takes its place between *floccosum* and *Lychnitis*. In justice to Dr. Deakin we must however state, that he refers (apparently on his own authority) to Yarmouth as a station for his *V. pulverulentum*, and should there have been no mistake, we may really prove to be possessed of both these plants in England.

In succeeding numbers we find occasional references to Koch, Reichenbach, Wallroth and other distinguished German botanists, as well as frequent remarks which show an acquaintance with the plants of the South of Europe. At p. 479, *Ornithogalum pyrenaicum* is correctly referred to *O. Narbonense*; but we must be allowed to express our doubt of those plants being distinct species. *Epilobium virgatum* (Fries) appears for the first time as a British plant at p. 548 and fig. 624, having been found by the author in "marshy places about Lincoln;" it may be distinguished from *E. tetragonum*, its nearest ally, by having its stem-leaves rounded at the base and not at all decurrent. We have long expected that this plant would be found in Britain, and have searched diligently for it in many parts of England, Scotland and Ireland, but without success; and it gives us much pleasure to learn that Dr. Deakin has had the good fortune to meet with it. In the genus *Polygonum* we have again a strong proof of the care with which the author is now preparing the descriptive portion of his work, but at the same time evidence that he is not acquainted with the more recent publications upon English botany. He here introduces three species, two of which he considers as new to our flora, and the third he identifies with a plant noticed as a variety by Smith, and not previously adopted as a species in our books, although all the three will be found in the fourth edition of Hooker's 'British Flora,' which was published in 1838. They are, *P. mite* (Schrank), obtained by him in the neighbourhood of Lincoln; *P. dubium* (Deakin), which is *P. Raii* (Bab.); *P. Roberti* (Hook.), *P. marinum* (Ray), and *P. aviculare* ε. (Sm.); and *P. maritimum* (Linn.), of which, although the characters, description and figure are correct, the synonyms, and we fear also the localities, all belong to the preceding species.

The figures are usually six in each octavo plate, and certainly do much credit (particularly the later ones) to the author, by whose own hand we believe all the drawings were made. Although small they are generally clear and characteristic, and are usually accompanied by dissections of the flower. Some of them are of peculiar excellence, and will nearly all of them prove of considerable value, when referred to in conjunction with the full descriptions, to those young botanists who have not access to the plates of 'English Botany.' It grieves us to be obliged to add, that the colouring is so very far from good, that the uncoloured copies published at half the price are decidedly superior to those which are coloured.

After what we have already said, it will create no surprise that several of the plants which have been recently detected in this country have not found a place in the present work; we trust, however, that they will be included in an appendix. The system adopted is that of Linnæus, and the last number that we have seen (58, April 1842) concludes with the genus *Scleranthus*. The numbers are published monthly, and contain two plates and eight pages of description.

In conclusion we may be allowed to express a hope that the author will continue the work with care equal to that which he has shown in the portion already published, and then, we venture to foretell, that this book must ultimately well repay both him and also the publisher, as, in that case, it cannot fail to obtain the approbation of the older, and to be generally used by the younger, botanists of Britain.

Transactions of the Botanical Society at Edinburgh. 2 Parts, 8vo, pp. 132, with 7 Plates. Edinburgh, Maclachlan, Stewart and Co.

We are happy to find that the Botanical Society at Edinburgh has commenced publishing a volume of Transactions, of which two parts have already been printed. They contain several papers which will prove highly interesting to botanists.

A report, by Dr. Greville, on the progress and state of Botany in

Britain, from March 1839 to February 1840 inclusive, is ably drawn up, and contains, in the form of an appendix, an arranged catalogue of all the works, papers and monographs which were published in Britain during that period. If such reports are prepared in a similar manner in future, they will be interesting records of British botany, and will prove valuable works of reference. We understand that Dr. Balfour has recently continued this report, and that it will be brought up to the present date by Dr. Graham. Mr. Babington has contributed several papers. The first is on the British *Atripliceæ*, in which he endeavours to elucidate the species contained in this neglected tribe. He has included the species under the genera *Atriplex* (Linn.) and *Halimus* (Wallr.). Under the former he notices the species *littoralis* (Linn.), *marina* (Linn.), *angustifolia* (Sm.), *erecta* (Huds.), *prostrata* (Bouch.), *patula* (Linn.), *microsperma* (W. et K.), *deltoidea* (Bab.), *rosea* (Linn.), and *laciniata* (Linn.). Under the latter he describes *H. pedunculatus* (Wallr.) and *portulacoides* (Wallr.). The distinctions between the species are founded chiefly on the form of the leaves and of the calyx of the fruit, and of these correct delineations are given.

In his next paper Mr. Babington treats of another difficult genus, viz. *Fumaria*. The British species are noticed under the names *capreolata* (Linn.), *officinalis* (Linn.), *calycina* (Bab.), *parviflora* (Lam.), and *Vaillantii* (Loisel.); and he has, in our opinion, cleared up many of the difficulties connected with the species and produced a monograph of great value. The paper is accompanied with wood-cuts, showing the characters derived from the calyx, the comparative lengths of the peduncles and bracts, and the forms of the fruit.

In addition to these communications Mr. Babington has also furnished a third on the true *Hypericum quadrangulum* of Linnæus.

Dr. Greville has taken up the subject of the botanical characters of the British Oaks, and has given excellent delineations of the various forms of the leaves and fruit, thereby showing that it is not as yet determined if we possess one or three distinct native species in this country, and pointing out the necessity of further observations.

Mr. Edward Forbes, honourably known for his zoological as well as for botanical papers, has supplied observations on the specific value of the antherine appendages of the genus *Viola*. He shows that, by the form of the nectaries, (either lanceolate, rotund, or linear,) combined with characters taken from the leaf and colour, a very natural arrangement may be made of the species of *Viola*.

Mr. Hewett Watson's paper on the Distribution of British Ferns is one of great interest, and is accompanied by detailed lists showing the range of the species.

A new *Jungermannia* is described and figured by Dr. Taylor, the well-known and celebrated coadjutor of Sir W. Hooker in the 'Muscologia Britannica,' under the name of *J. Lyoni*; and a new fossil, supposed to be allied to the genus *Orthos*, and denominated *Orthocites Grantonii*, is noticed and figured by Dr. Robert Paterson.

Dr. James Macaulay gives a sketch of the botanical regions in the Island of Madeira, and Mr. Dickie makes remarks on the structure and morphology of *Marchantia*. The metamorphoses of plants are elucidated by Dr. Giraud in the case of a variety of *Antirrhinum majus*, and by Mr. Leefe in the transformation of the pistil of *Salix capræa*.

Besides these there are various interesting communications, particularly by Mr. Shuttleworth, on the *Diatomaceæ*, and by Mr. Brown of Thun, on *Gentiana amarella* and *germanica*.

The third part of these Transactions is in progress, and we have reason to believe will be published in the autumn of the present year. From an excellent regulation of the Society (which now consists of about 400 members), those members who may desire to obtain an early perusal of the papers selected for publication, may obtain the sheets by post, as soon as printed, by making a small deposit of money in the hands of the treasurer, to meet the necessary expenses incurred by affording them this advantage. Accordingly we have before us a portion of the third part, and can assure our readers that the forthcoming part bids fair to be fully equal to those which have preceded it.

In conclusion we must congratulate the Society upon so auspicious a commencement, and feel satisfied that by continuing the publication of its Transactions with similar spirit, not only will credit be conferred on the Society, but also a decided benefit will accrue to botanical science.

Linnæa, ein Journal für die Botanik, etc. 1841.

[Continued from vol. vii. p. 434.]

PART I.

Algological observations; by J. G. Agardh.—On the American *Proteaceæ* of the Berlin collection; by J. F. Klotzsch.—Remarks on the occurrence of Amylum in Cryptogams; by Dr. Vogel.—Additions and corrections to his Synopsis of the genus *Cassia*; by Dr. Vogel.—Remarks on some species of *Thymus* and *Origanum*; by Dr. Vogel.—Revision of *Artemisiæ* of Berlin collection; by Wilibaldo de Besser.—On a collection of plants from Bahia.—On New Mosses from Southern Africa; by F. Hornschuch.—Information and invitation respecting the publication of a Repertorium Botanices Specialis.

PART II.

Prodromus Floræ Timorensis; by J. B. Spanoghe.—Phytophysiological observations; by J. Muenter.—Plants of Caucasus, Georgia and Armenia; by Dr. C. Koch.—Observations on certain new genera; by N. Lilja.—Instance of Antholysis in the flowers of *Trifolium repens*; by T. Schmitz.—On *Torula fenestralis*; by L. H. Schwabe.—Invitation to Physiologists; by Dr. Schmalz.

PART III.

On *Tetradiclis*, Stev.; by Dr. E. Fenzl.—On the structure of certain Mosses; by L. C. Treviranus.—*Acanthaceæ* of Southern Africa; by C. G. Nees von Esenbeck.—On the Flora of Hercynia; by E.

Hampe.—Invitation to authors of treatises of Anatomy and Physiology of Plants; by Dr. H. Mohl.

Part IV.

On the Genesis of Spiral Vessels; by Dr. Unger.—Monstrosities of certain plants; by Schlechtendal.—Critical revision of *Leptospermeæ* cultivated in Germany; by S. Schauer.—On Mexican plants; by Schlechtendal.

Part V.

Abietinæ of Berlin Gardens; by H. F. Link.—On the different kind of cellular tissue in Algæ; by Dr. Kutzing.—On *Chondrilla stipitata* and *tuberosa*; by C. H. Schultz.—Revision of Anemones; by G. A. Pritzel.—On *Artemisia virens* and *Santonica Linnæi*; by W. de Besser.

Part VI.

On *Lactuca*; by C. H. Schultz.—On *Ceramium*; by Dr. Kutzing.—On the anatomical structure of *Casuarinæ*; by Dr. Göppert.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

October 12, 1841.—Professor Owen, Vice-President, in the Chair.

A letter from John Parkinson, Esq., was read. In this letter Mr. Parkinson encloses a communication which had been forwarded to him by Mr. Commissary General Coffin, tending to prove the disposition of the woodcock to return, not only to the same district but to a once-frequented spot. The communication is as follows:—

"In the year 1833 a woodcock with white feathers in the wings was observed in a cover on the manor of Monkleigh, near Torrington, in the county of Devon. The same bird, or one of exactly similar plumage, re-appeared in the same place during the four succeeding seasons, in which period it was so repeatedly shot at by different persons without effect, that it at last acquired among the country-people the name of 'the witch.' In the year 1837 however it was killed by John Piper of Monkleigh, while following the owner of the property which it frequented, the Rev. J. T. Pine Coffin of Portledge, who has now the stuffed specimen in his possession.

"The white feathers are the primary quills and bastard winglets of each wing, the remainder of the plumage being of the ordinary hue. These feathers are all of a pure white, and seem to be of a closer and stronger texture than usual, but no other peculiarity is observable. It is however worthy of notice, that the cover which formed its constant haunt, when not disturbed, is a piece of wood not exceeding fifty acres in extent; thus proving the disposition of the woodcock to return, not only to the same district but to the same spot which it has once frequented, and to which it is probably first directed by the parent bird, or by other companions older than itself."

"Barnstaple, 17th July, 1841."

A letter from Sir Robert Heron, Bart., was next read. It states